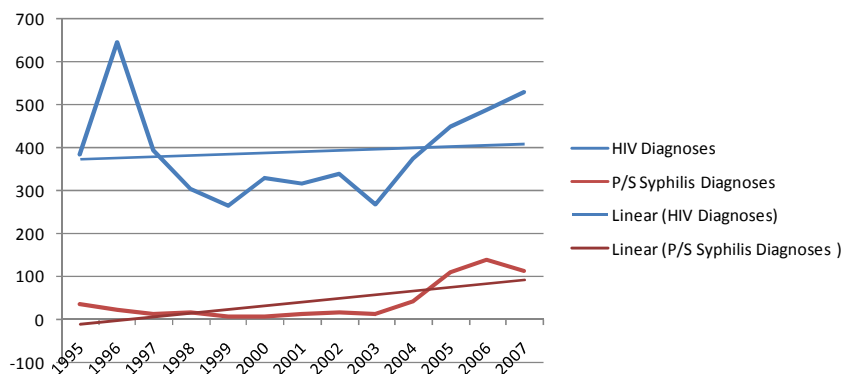


# Coinfection: HIV and Primary/Secondary Syphilis

Earlier this decade, syphilis began to reemerge in the United States as a notable public health threat among high risk groups, such as men who have sex with men (MSM) and African Americans. Public health professionals believe that the increase in HIV and syphilis coinfection has to do with anonymous sexual partners, inconsistent condom use, and an increased number of sexual partners<sup>1</sup>.

Nevada HIV and Primary/Secondary Syphilis Diagnoses by Year of Diagnosis, 1995 - 2007



In 2006, Nevada ranked 4<sup>th</sup> nationally for the rate per 100,000 of new primary and secondary syphilis cases, and 1<sup>st</sup> for the rate per 100,000 of new congenital syphilis cases. The epidemic is primarily in urban settings including New York City, Seattle, Los Angeles, and more recently, Las Vegas. Clark County ranked 18<sup>th</sup> nationally among counties for the rate per 100,000 of new primary and secondary syphilis in 2006. Clark County, accounting for 71 percent of the state population, continues to account for the greatest percentage of cases with 95 percent of the early infectious syphilis cases residing in the county. The syphilis outbreak in Southern Nevada appears to be two parallel epidemics, one among heterosexual Black, non-Hispanic persons and another among White, non-Hispanic men with a risk of male to male sexual contact. Co-infection with HIV and syphilis is primarily among the MSM community.

## Diagnosing Coinfection

Syphilis is a curable sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. Congenital syphilis is transmitted from mother to child in utero and infectious syphilis is primarily transmitted through sexual contact. Syphilis can be diagnosed at different stages after infection. In this analysis, infectious syphilis (primary and secondary) will be used. Primary syphilis is transmitted typically through contact with infectious lesions of an infected person. A diagnosis of primary syphilis is normally made within 10 to 90 days of exposure and symptoms include one or more ulcers (chancres) at the site of exposure. Secondary syphilis follows primary syphilis by approximately 1 to 6 months after primary infection and consists of symptoms ranging from skin eruptions to mucosal lesions. The stages of syphilis remain unaltered by the presence of HIV. However, the presence of syphilis increases the likelihood of HIV transmission among MSM. Further, when an individual already has an STD, they are 3 to 5 times more likely to acquire HIV through sexual contact. For those persons infected with HIV first, the use of antiretroviral therapy (ARV) in treatment has been an indirect contributor to higher syphilis rates. Serological testing and clinical presentation are still considered the most accurate and reliable methods for diagnosing syphilis in a person already infected with HIV. A thorough clinical exam of HIV-infected patients to identify syphilis is highly emphasized by experts because the infection may present with atypical symptoms.<sup>1</sup>

Epidemiology of Nevada Primary/Secondary Syphilis and HIV Co-infected Persons, 2007 *	
Stage of Syphilis Diagnosis	
Primary	3
Secondary	38
Reported a Risk Factor of MSM	
Yes	40
No	1
County of Residence at Syphilis Diagnosis	
Clark	38
Washoe	3
Age at Syphilis Diagnosis	
21 - 25	8
26 - 30	4
31 - 35	6
36 - 40	9
41 - 45	7
46 - 51	6
52+	1
Race	
White	21
Black	11
American Indian/ Alaskan Native	0
Asian	1
Unknown	8
Ethnicity	
Hispanic	5
Non-Hispanic	29
Unknown	7

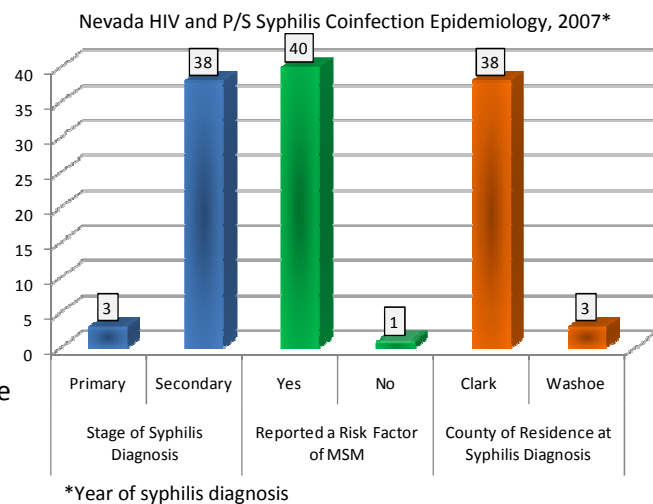
\*based on year of syphilis infection

<sup>1</sup> Hall, C.S., MD, MS, and Bolan, G., MD. (June 2006). *Syphilis and HIV*, HIV InSite Knowledge Base Chapter. <http://hivinsite.ucsf.edu/InSite?page=kb-05-01-04#S4.1X>

## Coinfection Epidemiology

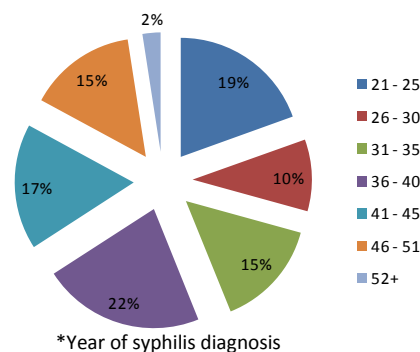
The national HIV/syphilis coinfection estimates range between 20 to 73 percent among MSM. In 2007, Nevada had an HIV and primary/secondary syphilis coinfection rate of 41.4 percent (41/99) among men and 0.0 percent (0/12) among women. Ninety seven percent (97 percent) of the men with a coinfection reported being MSM.

Of the coinfections, 3 were residing in Washoe County and the remainder was living in Clark County.



Based on age at syphilis diagnosis, 22 percent of the persons with a coinfection were aged 36 to 40, 19 percent were aged 21 to 25, 17 percent were aged 41 to 45, and the other age groups composed the remaining 42 percent of the cases.

Nevada HIV and P/S Syphilis Coinfection by Age Group, 2007\*



Over 70 percent (29/41) of the persons coinfecting with HIV and primary/secondary syphilis in 2007 were non-Hispanic. Though Blacks account for roughly 7 percent of the population in Nevada, they represented 27 percent of the new coinfection in 2007. Whites accounted for 51 percent of the new coinfections, the largest percentage of the cases based on race.

Nevada HIV and P/S Syphilis Coinfection by Race and Ethnicity, 2007\*

